SUPPORT FOR THE AMENDMENTS AND NEW CLAIMS

The amendments are supported by the claims as originally filed and do not constitute new matter.

REMARKS

1. Obviousness-type double patenting

The Patent Office rejected claims 40-43 for obviousness-type double patenting over claims 1 and 4-6 of U.S. Patent No. 6,759,206. The Applicants are herewith submitting a terminal disclaimer to obviate the rejection.

2. Claim rejections under 35 USC 101

The Patent Office rejected claims 40-43 as directed to non-statutory subject matter, based on the assertion that the claims "do not produce a result which meets the standard of being concrete, tangible, and useful." The Applicants traverse this rejection, but have amended the claim consistent with the Patent Office's suggested change, and thus respectfully request reconsideration and withdrawal of the rejection.

3. Claims rejections under 112 second paragraph

(a) Claim 43 was rejected based on the assertion that the phrase "wherein the imaging multiple cells" lacks antecedent basis. The Applicants have amended the claim to obviate the rejection.

(b) Claim 43 was rejected based on the assertion that it was indefinite if step (i) is intended as a first, low resolution imaging step, followed by the high resolution imaging in step (ii), or if both steps (i) and (ii) include low and high resolution imaging steps. The Applicants traverse this rejection, but nonetheless have amended the claims, and thus respectfully request reconsideration and withdrawal of the rejection.

4. Rejection under 35 USC 102(e)

The Patent Office rejected claims 40-42 under 35 USC 102(e) as being anticipated by US 6,794,128 ("Marks"). The Applicants traverse this rejection.

In order to serve as an appropriate anticipatory reference under 35 USC 102(e), a reference must teach each and every limitation of the rejected claim.

As an initial matter, the Applicants note that the Patent Office mis-stated the Applicants remarks in their previous response. The Patent Office stated that "Applicants argue that Marks does **not** teach labeling of antibodies or bacteriophage or polypeptides that are not cell surface receptor proteins and assessing their internalization by fluorescence microscopy." (See page 9). In fact, this is exactly the **opposite** of what the Applicants stated:

> "Marks **does teach** labeling of antibodies or bacteriophage (ie: labeling of polypeptides that are **not** cell surface receptor proteins) and assessing their internalization by fluorescence microscopy." (Page 5, top of response filed November 27, 2006)

As a result, the Patent Office goes on to incorrectly assert that Applicant is distinguishing the presently pending claims from Marks based on Marks not assessing internalization by fluorescence microscopy. This was **not** the basis on which Applicants argued that Marks was not a proper anticipatory reference.

Instead, Applicants assert that Marks does not teach machine readable storage medium comprising a program containing a set of instructions to cause a cell screening system to execute at least the following limitations of currently pending claim 40:

> -Procedures for **measuring** internalization of cell surface receptor proteins;
> -Calculating a **number and/or percent of the individual cells** that internalized the at least first luminescently labeled reporter molecule wherein the calculations provide a measure of internalization of the cell surface receptor protein in the individual cells; and
> - Displaying data on the measure of internalization of the cell surface receptor protein in the individual cells

As note above (and previously argued), Marks teaches labeling of antibodies or bacteriophage (which are **not** cell surface receptor proteins) and assessing **internalization of antibodies or bacteriophage** by fluorescence microscopy. Contrary to the Patent Office's characterization, the disclosure of Marks at column 13 lines 44-55 does **not** teach methods for identifying **internalizing receptors**. Instead, this passage states as follows:

> "Identification of Internalizing Receptors
> Once an antibody or polypeptide that is internalized into a cell has been identified, it is possible to probe one or more cell types with the identified antibody or polypeptide to identify the target recognized and bound by the antibody. Since the antibody is an internalizing antibody it is ***likely*** that such targets are themselves internalizing targets (e.g. members or portions of internalizing receptors)"

Thus, Marks disclosure simply teaches that **if** the antibody or bacteriophage happens to bind to a receptor and, **if** after binding that receptor happens to internalize together with the antibody or bacteriophage (thus requiring that they stay bound, which is often not the case), then bound and internalized receptor can be identified. This interpretation is supported by the disclosure in Column 1, lines 20-25 cited by the patent office (e.g.: "...as well as the internalizing receptors **bound.**") This is quite distinct from the invention of claim 40, which requires machine readable storage media comprising a program containing a set of instructions to cause a cell screening system to **measure** internalization of cell surface receptor proteins; calculating a **number and/or percent of the individual cells** that internalized the at least first luminescently labeled reporter molecule wherein the calculations provide a measure of internalization of the cell surface receptor protein in the individual cells; and displaying data on the measure of internalization of the cell surface receptor protein in the individual cells.

Furthermore, the Patent Office's reliance on the Marks disclosure at column 46 lines 47-48; column 47 line 65 to column 48 line 3; and Figure 9 to assert that Marks teaches calculating a number and/or percentage of individual cells that internalized the labeled reporter molecule (that reports on cell surface receptor protein of interest) is misplaced. These passages In Marks refer to a measure of GFP **expression** from SKBR3 cells after incubation with F5-GFP phagemids. F5 is disclosed as antibody "anti-ErbB2-scFV" (see column 42 line 64) (See also the description of Figure 9 at column 11 lines 21-39). Thus, the passage cited by the Patent Office teaches expression of a GFP-antibody chimeric protein in cells—this is **clearly not** a teaching of a measure of cell surface receptor protein internalization.

Based on the above, it is clear that Marks does not teach all (or even many) of the limitations of claim 40, and thus is not a proper anticipatory reference. The Patent Office has not provided any guidance as to how Marks is asserted to anticipate the limitations of dependent claims 41 and 42. In any event, since these claims are dependent on claim 40, they contain all of the limitations of claim 40, and thus Marks is not a proper anticipatory reference for claims 41-42.

Therefore, the Applicants respectfully request reconsideration and withdrawal of the rejection.

5. Rejections under 35 USC Section 103

The Patent Office rejected claims 40-43 under 35 USC 103(a), as being obvious over Marks in view of US 5989835. The Applicants traverse this rejection.

In order to establish a prima facie case of obviousness, the combination of art cited must teach all of the claim elements of the rejected claims. The deficiencies of Marks are discussed above, and its combination with Dunlay does not cure these deficiencies. Therefore, the Applicants respectfully request reconsideration and withdrawal of the rejection.

Based on all of the above, the Applicants believe the claims are now allowable. If there are any questions or comments regarding this response, the Examiner is encouraged to contact the undersigned attorney as indicated below.

Respectfully submitted,

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